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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

ORACLE AMERICA, INC.

Plaintiff,

v.

GOOGLE INC.

Defendant.

Case No. CV 10-03561 WHA

**ORACLE'S RESPONSIVE CLAIM
CONSTRUCTION BRIEF**

Dept.: Courtroom 9, 19th Floor
Judge: Honorable William H. Alsup

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Hearing: April 20, 2011, 1:30 p.m.

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INTRODUCTION

The only serious claim construction issue raised by Google's briefing is "computer-readable medium" in only two patents where the evidence intrinsic to those patents arguably gives rise to a construction which, in turn, may give rise to an invalidity challenge. For the rest, Google's proposed constructions fail basic tests of well-settled claim construction law.

ARGUMENT

I. THE PLAY EXECUTING STEP ('520 PATENT)¹

In Oracle's opening brief, we discussed the evidence supporting that the "play executing step" in claims 3 and 4 is a reference to the "simulating execution" step in claim 1. Most important is the intrinsic evidence that "play executing" is synonymous with "simulating execution," including the express definition in the specification (below) and the patent examiner's use of the word "simulating" to refer to patent claims that contained the "play executing" phrase.

The disclosed system represents an improvement over conventional systems for initializing static arrays by reducing the amount of code executed by the virtual machine to statically initialize an array. To realize this reduction, when consolidating class files, the preloader identifies all <clinit> methods and simulates executing ("play executes") these methods to determine the static initialization performed by them.

'520, 2:61-3:1.

Google chooses to disregard this evidence and instead makes an argument based on an amendment to claim 1. The amendment changed "play executing" to "simulating execution . . . without executing the byte codes." The substitution of "simulating execution" for "play executing" did not change the scope of the claim; rather, the words that affected claim scope were "without executing the byte codes." The amendment merely brought the scope of claim 1 parallel in relevant respect to claims 6 and 18, which the examiner had already determined to be patentable:

¹ Unless otherwise indicated, all citations and internal quotations have been omitted, and all emphasis has been added. Patents are referred to by their last three numbers, and citations to patent specifications are in the form "patent, column:line", such as "'104, 2:60-62".

Claim 1 as amended and issued	Claim 6 as filed and issued	Claim 18 as filed and issued
<u>simulating execution of the</u> byte codes of the clinit method against a memory <u>without executing the byte</u> <u>codes</u> to identify the static initialization of the array by the preloader	play executing the code without running the code on the processing component to identify the operation if the code were run by the processing component	simulating execution of the code without running the code on the processing component to identify the operation if the code were run by the processing component

Google's argument based on *Novo Nordisk* lacks substance. Missing from Google's argument is any discussion of what "play executing" could mean if not "simulating execution." The specification makes the meaning of the claim clear notwithstanding the differing choice of words. Thus, the relevant case is not *Novo Nordisk* but rather *Energizer Holdings*: "When the meaning of the claim would reasonably be understood by persons of ordinary skill when read in light of the specification, the claim is not subject to invalidity upon departure from the protocol of 'antecedent basis.'" *Energizer Holdings, Inc. v. Int'l Trade Comm'n*, 435 F.3d 1366, 1370-71 (Fed. Cir. 2006).

When claim 3 recites "The method of claim 1 wherein the play executing step includes," it is immediately apparent which step of claim 1 is referred to. Claim 1 is a method claim that comprises five steps: (1) compiling, (2) receiving, (3) simulating execution, (4) storing, and (5) interpreting. "Simulating execution" is the natural and only choice for "the play executing step." In light of the specification and the prosecution history, no person of ordinary skill could read "the play executing step" to refer to nothing. That is not subject to reasonable debate. The claim is amenable to construction, and so is not indefinite. *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375, 1376 (Fed. Cir. 2001) ("As is often the case when problems in document drafting lead to litigation, the ideal of precision was not achieved here, and we are left to deal with an imperfect product. While we agree with the trial court that the product was less than perfect, we disagree that the flaws were fatal.").

1 **II. INTERMEDIATE FORM CODE ('104 PATENT)**
2 **INTERMEDIATE FORM OBJECT CODE ('104 PATENT)**

3 Oracle's opening brief focused on the intrinsic evidence in support of Oracle's claim
4 construction that "intermediate form [object] code" is executable code. Oracle Opening Br. at 7-
5 9. For example, the first sentence of the "Summary of the Invention" states:

6 A method and apparatus for generating *executable code* and resolving data
7 references in the generated code is disclosed.

8 '104, 2:25-29. The intrinsic evidence unambiguously drives a construction of "intermediate form
9 code" and "intermediate form object code" as *executable* code that is generated by compiling
10 source code and is independent of any computer instruction set.

11 Google misstates the issue when it asserts that "nothing in the specification amounts to a
12 clear disavowal of claim scope that would narrow the term's ordinary meaning." Google
13 Opening Br. at 16. The "executable" issue is not one of disavowal. Google points to no pre-
14 existing definition of "intermediate form object code" from which Oracle seeks to detract; rather,
15 Oracle seeks to construe a phrase that is internal to and explained by the '104 patent.

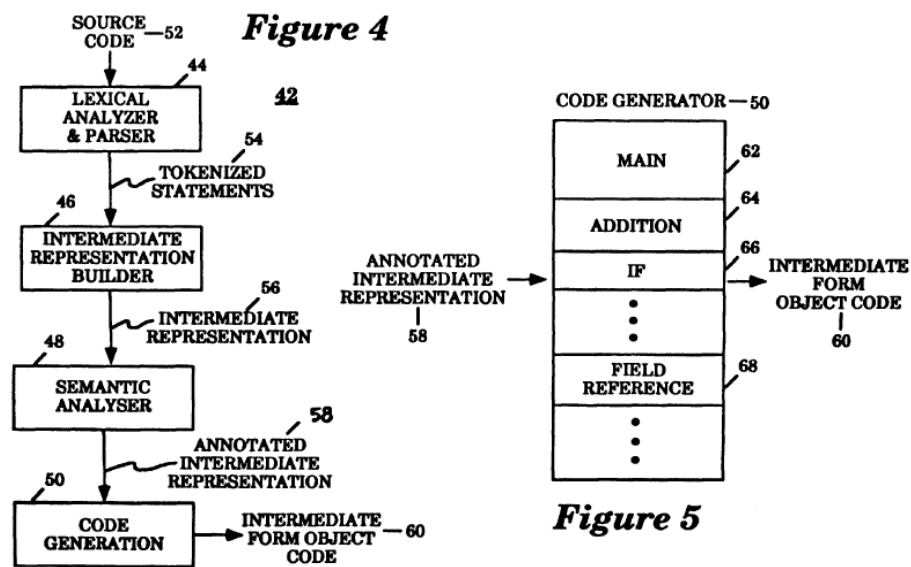
16 Google's definition, by contrast, is based on a phrase that the '104 patent acknowledges is
17 something different: "intermediate representation," which is an instantiation of a computer
18 program that is used internally by a compiler and is indeed not executable code. *See* Oracle
19 Opening Br. at 8-9. Google's conflation of these phrases is erroneous and should be rejected.

20 Google points to one sentence in the '104 specification, but even this does not support
21 Google. Google's sentence observes that "a variety of well known tokens, intermediate
22 representations, annotations, and intermediate forms may also be used to practice the present
23 invention." '104, 4:29-32. The sentence is silent on whether intermediate form code is
24 executable, but by separately enumerating an intermediate "representation" and an intermediate
25 "form," the sentence makes clear that the two are distinct.

26 The meaning of Google's sentence is further clarified by a description of the sequentially
27 coupled compiler components that appears in the specification ten lines before: "Together, they
28 transform program source code 52 into tokenized statements 54, intermediate representations 56,
29 annotated intermediate representations 58, and ultimately intermediate form code 60 with data

references made on a symbolic basis.” ’104, 4:19-23. “Intermediate form code 60” is shown in Figure 4 as “intermediate form object code 60,” making it clear that those two phrases are used interchangeably in the ’104 patent. In contrast, that “intermediate representations” and “intermediate forms” are repeatedly enumerated separately in Google’s citation further underscores the fact that they are not the same.

Figures 4 and 5, moreover, clearly illustrate that “intermediate form code 60” and “intermediate form object code 60” are the output of a compiler and that “intermediate representations” are not:



“FIG. 4 illustrates one embodiment of the compiler of the hybrid compiler-interpreter of the present invention. FIG. 5 illustrates one embodiment of the code generator of the compiler of FIG. 4.” ’104, 3:14-17. As explained in Oracle’s opening brief, the qualifier of “intermediate form” indicates that the claimed code is not dependent on the instruction set of a specific type of machine (’104, 1:58-62), unlike the typical case for compiled object code (’104, 2:60-67).

Google argues that “intermediate form object code” need not be executable because the word “executable” supposedly does not modify “code” in the asserted claims, in contrast to original claims 1 and 6. Google has it exactly backwards: the recitation of “generating executable code in intermediate form” in claims 1 and 6 matches the usage in the asserted claims and confirms that “intermediate form code” as used in the patent refers to executable code.

1 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (*en banc*) (“Because claim terms
2 are normally used consistently throughout the patent, the usage of a term in one claim can often
3 illuminate the meaning of the same term in other claims.”).

4 All of the other ’104 patent claims are consistent with claims 1 and 6. Each claim in which
5 “intermediate form code” or “intermediate form object code” is used consistently refers to it as
6 executable, as explained in Oracle’s opening brief at pages 7-8. Variants of “execute,”
7 “execution,” “executing,” and “interpreting” appear in each claim at issue, just as in claims 1 and
8 6. Google’s proposed construction is not consistent with the claim language.

9 **III. RESOLVE / RESOLVING (’104 PATENT)**

10 Oracle’s opening brief showed how its proposed construction of “resolve” and “resolving”
11 provides meaning to all relevant claim terms and is compatible with the specification. Google’s
12 proposed construction fails to account for the multiple objectives of the invention and is
13 inconsistent with the claim language, specification, and prosecution history of the ’104 patent.

14 The claim language alone proves Google is wrong. Claim 20 recites “resolving the
15 symbolic reference in the instruction by determining a numerical reference corresponding to the
16 symbolic reference.” That tells us that “resolving” does not necessarily mean anything more than
17 “determining a corresponding numerical reference” and, more particularly, does not necessarily
18 require “storing.”

19 Claim 13 recites “resolving a symbolic reference in an instruction, said step of resolving
20 said symbolic reference including the substeps of: determining a numerical reference
21 corresponding to said symbolic reference, and storing said numerical reference in a memory.”
22 Claim 14 recites: “The method of claim 13, wherein said substep of storing said numerical
23 reference comprises the substep of replacing said symbolic reference with said numerical
24 reference.” That tells us that “resolving” does not necessarily require “replacing.”

25 The ’104 patent’s specification shows that “resolving” was a well-known term of art at the
26 time of the application. The Court’s construction of “resolving” should be consistent with that
27 meaning. According to the specification, in some prior art interpreted programming languages,
28 “[e]ach of the symbolic references is resolved during execution *each time* the instruction

1 comprising the symbolic reference is interpreted.” ’104, 2:3-6. Google’s argument that the
 2 quoted language is a “concession” that prior art interpreters “resolve a symbolic reference by
 3 replacing it” is without any textual support. Google Opening Br. at 19. If an instruction’s
 4 symbolic reference were replaced by a numeric reference, it would be resolved only once—not
 5 each time the instruction was interpreted.

6 Figure 1 and its description further support Oracle’s construction and negate Google’s
 7 argument that Figure 8 is the only figure in the patent relevant to “resolving.” Figure 1 “shows
 8 the prior art compiled approach and the prior art interpreted approach to resolving data
 9 reference.” ’104, 3:6-7. There is no “replacement” shown in Figure 1.

10 Moreover, the textual description of Figure 8, which Google cites but does not quote,
 11 actually supports Oracle’s construction. Figure 8 “illustrates an exemplary **resolution and**
 12 **rewriting** of a data reference under the present invention.” ’104, 3:26-27. If resolution and
 13 rewriting had the same meaning, as Google argues, then the applicant would not have used both
 14 words to describe the figure.

15 Attempting to read limitations from the specification into the claim language, Google
 16 emphasizes the use of the phrase “under the present invention.” But the very case Google cites
 17 for the significance of the words “the present invention” warns against “reading improperly a
 18 preferred embodiment into the claim.” *Trading Techs. Int’l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340,
 19 1353 (Fed. Cir. 2010). The relevant portion of the ’104 patent specification states:

20 Thus, except for the first execution, the extra level of interpretation to resolve the
 21 symbolic reference is no longer necessary. Therefore, ***under the present invention,***
 22 ***the “compiled” intermediate form object code of a program achieves execution***
 23 ***performance*** substantially similar to that of the traditional compiled object code,
 24 ***and*** yet it has the ***flexibility*** of not having to be recompiled when the data objects it
 deals with are altered like that of the traditional translated code, since data
 reference resolution is performed at the first execution of a generated instruction
 comprising a symbolic reference.

25 ’104, 5:39-49. Google fails to point out that the quoted text refers to Figure 8, which, as noted
 26 above, is merely “exemplary.” ’104, 3:26-27, 5:31-33. The sentence that recites “under the
 27 present invention” lists two objectives (performance and flexibility), and it explains why these
 28 goals are achieved in Figure 8, but it does not equate “resolving” with “replacing.” Moreover,

1 “[b]ecause an inventor must evince a ‘clear intention’ to limit the claim terms to a specification
 2 embodiment, [the Federal Circuit] examines other claims to detect any contrary intentions.”
 3 *Trading Techs.*, 595 F.3d at 1354. There are several ’104 patent claims that recite “replacing”
 4 (claims 14, 30, 31, 32) and each one recites “replacing” in close proximity to “resolve” or
 5 “resolving,” indicating that these words mean different things. Moreover, we know that the
 6 inventor did *not* intend to limit the claims to a preferred embodiment, because the patent so states:
 7 “While the present invention has been described in terms of presently preferred and alternate
 8 embodiments, those skilled in the art will recognize that the invention is not limited to the
 9 embodiments described. . . . The description is thus to be regarded as illustrative instead of
 10 limiting on the present invention.” ’104, 5:50-57.

11 Google’s citation to the prosecution history² does not support its proposal; it mentions
 12 neither “replacing” a reference nor the “life of a process.” Google Opening Br. at 20. What the
 13 prosecution history does say is: “When an unresolved symbolic reference is encountered, a
 14 numerical value corresponding to the reference is determined and stored in memory. When a
 15 resolved symbolic reference is encountered, the instruction is interpreted by reading the stored
 16 numeric value.” ’104 file history, 11/21/1996 Reissue Application Declaration of James Gosling
 17 at 3-4 (Peters Decl. Ex. 6). This quotation does not define “resolving” to mean “replacing.” And
 18 it would be improper to use this quotation to construe “resolving” to include “storing,” because
 19 some claims that recite “resolving” do not recite “storing” at all (e.g., claims 20, 21, 23, and 41),
 20 and because at least one claim recites “resolving” and “storing” as distinct substeps (claim 17).

21 Oracle’s proposed construction fits *all* of the claims that use the term “resolving,” and
 22 hence should be adopted.

23 **IV. SYMBOLIC REFERENCE (’104 PATENT)**

24 As demonstrated in Oracle’s opening brief, Oracle’s position that “symbolic reference”
 25 needs no construction and that its ordinary meaning is “a reference by name” is directly supported

26 _____
 27 ² Certified copies of the patents and their file histories are attached as Exhibit 11 to the
 28 Supplemental Declaration of Marc David Peters in Support of Oracle’s Responsive Claim
 Construction Brief (“Peters Supp. Decl.”).

1 by the specification. The intrinsic evidence makes clear that when “references to data are made
2 on a symbolic basis,” that reference is made “by name”:

3 References to data in the intermediate form are not fully resolved before execution
4 based on the layout of the data objects that the program deals with. Instead,
5 **references to data are made on a symbolic basis.** Thus, an instruction that
6 accesses or fetches y, such as the Load instruction 14' illustrated in FIG. 1,
7 references the variable y **by the symbolic name “y”.**

8 '104, 1:61-67; *see also* 5:34-36, Fig. 8.

9 Google's extrinsic evidence reveals that the ordinary meaning of “symbolic reference” is a
10 reference by name. *See* Oracle Opening Br. at 13. In Google's proffered dictionary, the
11 definition of “symbol” is “a name”. MICROSOFT PRESS COMPUTER DICTIONARY 379 (2d ed.
12 1994) (Peters Decl. Ex. 3).

13 Of course, a symbolic reference may contain or comprise a number. Some commonsense
14 examples may help to illustrate the point:

- 15 • “280” is a symbolic reference comprising a number that is a name of a highway
16 without identifying the numeric geo-coordinates of the highway referenced;
- 17 • “Courtroom 9” is a symbolic reference containing a number distinct from its location
18 of “450 Golden Gate Avenue, 19th Floor, San Francisco, CA 94102”;
- 19 • 1-800-MATTRES” is a symbolic reference containing letters and numbers that refers
20 to a telephone number.

21 The constructions of “symbolic reference” and “numeric reference” are as straightforward
22 as they are unnecessary. A symbolic reference is a reference by name. A numeric reference is a
23 reference by location. Both the '104 specification and dictionary definitions describe and employ
24 these well-known meanings.

25 Google's proposal is anything but straightforward. Google argues that a symbolic
26 reference is a “dynamic reference to data that is string- or character- based.” This is not
27 supported by the plain language of the claims, the specification, prosecution history, nor Google's
28 own proffered dictionary definitions. *See* Oracle Opening Br. at 12-14.

Google asks the Court to import “string- or character-based” into the claim, even though
the specification does not even contain these words. Google's description (Google Opening Br.
at 15) of an example in the specification is incomplete—the '104 patent lists three examples of

1 symbolic references (x, y, and name), not two: “Continuing the preceding example, if the point
2 data object had a new field added at the beginning called name, which contains the name of the
3 point, then the variables x and y could be assigned to slots 2 and 3.” ’104, 1:51-54. But these
4 examples are not limiting. *Ventana Med. Sys., Inc. v. Biogenex Labs., Inc.*, 473 F.3d 1173, 1181
5 (Fed. Cir. 2006) (claims are not limited to disclosed embodiment and need not cover every feature
6 disclosed in specification). As Google has been known to say, “nothing in the specification
7 amounts to a clear disavowal of claim scope that would narrow the term’s ordinary meaning.”
8 Google Opening Br. at 16.

9 Google also attempts to import “dynamic” into “symbolic reference.” That is illogical, as
10 explained in Oracle’s opening brief at page 13. And what is a “dynamic reference”? Google
11 doesn’t say. There will certainly be a need to “construe the construction” if “dynamic” simply
12 substitutes for “symbolic” in the claims.

13 Finally, Google’s proposal is ambiguous. In Google’s phrase “dynamic reference to data
14 that is string- or character-based,” is it the “reference” or the “data” that is string- or character-
15 based? This lack of clarity alone should lead the Court to reject it.

16 **V. REDUCED CLASS FILE (’702 PATENT)**

17 In Oracle’s opening brief, we reviewed the intrinsic evidence showing that “reduced class
18 files” are not necessarily “class files”: while reduced class files may have duplicated elements
19 removed and placed elsewhere, they also may have added to them a “new constant type” and
20 “corresponding constant type tag” that causes reduced class files to violate the class file format
21 specification. *See, e.g.*, ’702, 9:55-62. Google’s analysis is flawed because it focuses only on
22 what is removed from class files, and ignores what may be added to them.

23 In one embodiment of the ’702 patent, the act of removing a duplicated element from a
24 class file to obtain a reduced class file is carried out by placing the duplicated constant element
25 into a shared constant pool outside the class file, and replacing the duplicated element with a new
26 constant type element that contains a pointer to the duplicated element in the shared constant
27 pool. ’702, 9:55-65. This new element causes the reduced class file to violate the class file
28 format: its new tag type is not on the list of valid tags according to the class file format

specification ('702, 16:54-17:12), and the fact that it points outside the file means that the reduced class file is not “self-contained,” unlike a class file. '702, 4:3-4. None of the intrinsic evidence cited by Google contradicts this disclosure.

It's not clear why Google objects to the phrase “code and data contained in a class file” in Oracle's proposed construction, because this language (unlike Google's proposal) is taken directly from the specification: “Each class contains *code and data* in a platform-independent format called the class file format.” '702, 2:66-3:1. Google tries to support its argument that the “relevant elements of the class files at issue are ‘data’ and operations (i.e., ‘instructions’)” with a citation to Figure 3 (Google Opening Br. at 13), but the figure does not contain any of the words “data,” “operations,” or “instructions.” If the Court does construe this term, Oracle asks that it use “code and data” instead of “data and instructions,” if only because it hews to the specification.

**VI. COMPUTER-READABLE MEDIUM ('104 PATENT)
COMPUTER-READABLE STORAGE MEDIUM ('720 PATENT)
COMPUTER-READABLE MEDIUM ('520 PATENT)
COMPUTER USABLE MEDIUM ('702 PATENT)
COMPUTER-READABLE MEDIUM ('447 PATENT)
COMPUTER-READABLE MEDIUM ('476 PATENT)**

The appropriate way to construe a claim is elaborated in *Phillips*, which synthesizes a large body of Federal Circuit claim construction jurisprudence since *Markman*. The *Phillips* methodology is accurately set out on pages 2 and 3 of Google's brief—if only Google would follow it. Google's claim construction approach with respect to the “computer-readable medium” terms is to take the language that it most prefers, which appears in only two of the seven patent specifications, and apply it indiscriminately to *all* of the patents in suit. Google justifies its approach by pointing to specifications of unrelated patents not even in the case. In so doing, Google has stood *Phillips* on its head, putting extrinsic evidence ahead of intrinsic evidence. Nowhere is this more painfully obvious than in Google's treatment of the '104 patent, in which the '104 specification does not rate a single mention.

Oracle does not take the position that all the terms in the various patents relating to “computer readable medium” necessarily should have the same construction. Oracle's position is

1 that the same claim construction *methodology* should be applied to each patent to construe its
 2 claims. For four of the patents (the '104, '520, '720, and '702 patents), because storage media are
 3 the only disclosed embodiments and because the various claims require the media to hold code,
 4 embody code, contain instructions, or be part of a computer program product, the intrinsic
 5 evidence for each patent shows that the correct construction is “a storage device for use by a
 6 computer.” For two of the patents (the '447 and '476), additional claim construction doctrines
 7 apply, which mean that the Court should avoid construing “computer-readable media” to embrace
 8 transmission media.

9 A. '104 Patent

10 The specification of the '104 patent discloses only memories or storage devices to store
 11 code for use by a computer in support of “computer-readable media.” '104, 3:52-56, Fig. 2. The
 12 specification does not disclose carrier waves, coaxial cables, copper wire, or any transmission
 13 media as embodiments of computer-readable media. The evidence from the prosecution history
 14 is that the inventor added “computer-readable medium” claims through the reissue process in
 15 order to claim “computer program code devices” as permitted by *In re Beauregard*. How do we
 16 know this? Because he said so in his sworn reissue declaration. '104 file history, 11/21/1996
 17 Reissue Application Declaration of James Gosling at 3 (Peters Decl. Ex. 6).

18 Google’s argument that the '104 inventor intended to encompass “waves” is a fantasy,
 19 unsupported by any intrinsic evidence. “Waves” are not disclosed in the '104 specification.
 20 “Waves” are not computer program code devices. “Waves” are not mentioned in *Beauregard*,
 21 which concerned “computer program product claims” and “computer programs embodied in a
 22 tangible medium, such as floppy diskettes.” *In re Beauregard*, 53 F.3d 1583, 1584 (Fed. Cir.
 23 1995).

24 The '104 patent should be construed from the perspective of 1992, when its specification
 25 was filed. The '104 inventor, in his reissue declaration, stated “I believe I have the right to
 26 further specifically claim computer program code devices which embody my invention as
 27 supported by *the original disclosure*.” '104 file history, 11/21/1996 Reissue Application
 28 Declaration of James Gosling at 3 (Peters Decl. Ex. 6). In the *Markman* case, which involved the

1 interpretation of a reissue patent, the Federal Circuit held *en banc*: “The focus is on the objective
 2 test of what one of ordinary skill in the art ***at the time of the invention*** would have understood the
 3 term to mean.” *Markman v. Westview Instruments Inc.*, 52 F.3d 967, 986 (Fed. Cir. 1995) (*en*
 4 *banc*), *aff’d*, 517 U.S. 370 (1996). Even Google agrees: “Courts must determine the meaning of
 5 disputed claim terms from the perspective of one of ordinary skill in the pertinent art ***at the time***
 6 ***the patent was filed.***” Google Opening Br. at 2. Google violates this rule when it uses an
 7 unrelated 1997 specification to construe the ’104 patent instead of the ’104 specification. Google
 8 has cited no evidence from 1992, let alone 1996, that would indicate that “computer-readable
 9 medium” meant “carrier waves.” Google’s argument regarding Sun’s U.S. patent 5,953,522
 10 misrepresents the facts. Google Opening Br. at 9. “Carrier wave” does ***not*** appear in that
 11 patent’s July 1, 1996 specification or original claims—it was added to the claims by a 1998
 12 amendment. Peters Supp. Decl. ¶ 7 & Ex. 9. Later definitions do not control the interpretation
 13 of earlier patent claims. *Schering Corp. v. Amgen Inc.*, 222 F.3d 1347, 1353-54 (Fed. Cir. 2000)
 14 (holding that when evidence showed that scientific term had one meaning at time application was
 15 filed, and acquired another meaning five months later, correct construction was earlier meaning).
 16 Google’s one cited case is *Reiffin*, which is not relevant to the issue at hand. *Reiffin* was not a
 17 claim construction case; instead, it held that, for purposes of evaluating compliance with the
 18 written description requirement, the relevant specification is the one for the patent. *Reiffin v.*
 19 *Microsoft Corp.*, 214 F.3d 1342, 1345 (Fed. Cir. 2000). The ’104 specification was filed in 1992,
 20 and supports the claims introduced through the reissue process.

21 Google’s argument regarding Oracle’s “hundreds” of patents is without consequence. Not
 22 only are such patents irrelevant, un contemporaneous extrinsic evidence, but Google conceals the
 23 second half of the evidence: Far more “computer-readable medium” patents do ***not*** mention
 24 “carrier waves” than do, and far more of Oracle’s “computer-readable medium” patents do ***not***
 25 mention “carrier waves” than do. Peters Supp. Decl. ¶¶ 1-6. No court has held that the meaning
 26 of “computer-readable medium” has ever been “widely recognized as a legal term of art that
 27 included wireless transmission.” Google Opening Br. at 10. Not even the Patent Office believes
 28 this to be true. *Ex Parte Daughtrey*, No. 2008-000202, 2009 WL 3489861, at *4 (B.P.A.I. July

31, 2009) (holding that it was “imprudent” to construe “computer readable medium” based on usage in contemporaneous patents and that “it does not appear that ‘computer readable medium’ had any commonly-recognized understanding in the art at the time of Appellant’s invention [in 2001]”).

B. ’720 Patent

Claim 19 of the ’720 patent claims a “computer-readable storage medium holding code for performing the method according to claim 10.” Oracle demonstrated in its opening brief that the only storage media holding code disclosed in the ’720 patent were “storage devices,” and thus the Court should construe computer-readable storage medium in the ’720 patent to mean “a storage device for use by a computer.” Google acknowledges that the “only relevant disclosure of the ’720 patent specification is to storage device 19, storage device 15, and storage device 35.” Google Opening Br. at 7. Though the ’720 specification discloses “hardwired and wireless network configurations” that interconnect various computing devices, it does not disclose that they are storage media that hold code.

Google’s argument that the ’720 patent should be construed to mean “carrier waves” is based exclusively on extrinsic evidence. The ’720 specification does not disclose “carrier waves” and it is not true that “carrier waves” were imported into the ’720 specification through incorporation by reference. To incorporate matter by reference, a host document “must identify with detailed particularity what specific material it incorporates and clearly indicate where that material is found in the various documents.” *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). Google’s evidence does not meet this standard. The ’720 patent specification refers twice to the ’661 application Google relies on, using the same sentence each time:

The classes and interfaces are identified through profiling by ranking a set of classes according to a predetermined criteria, such as described in commonly-assigned U.S. patent application Ser. No. 09/970,661, filed Oct. 5, 2001, pending, the disclosure of which is incorporated by reference.

’720, 3:1-6, 6:41-46. Under the rule in *Advanced Display Systems*, this sentence does not incorporate a definition of “computer readable storage medium” into the ’720 patent. Instead, it

incorporates only the '661 application's description of methods for identifying classes and interfaces through profiling by ranking a set of classes according to predetermined criteria. *Zenon Envtl., Inc. v. U.S. Filter Corp.*, 506 F.3d 1370, 1379 (Fed. Cir. 2007) ("We are not persuaded . . . that that language incorporates by reference the entire disclosures of the '373 and '083 patents. Such an interpretation is inconsistent with the plain language of the statement. The plain language expressly limits the incorporation to only relevant disclosures of the patents, indicating that the disclosures are not being incorporated in their entirety.").

Arlington Industries, which Google also relies on, does not hold to the contrary, and mentions an incorporated-by-reference patent only in dicta. *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1256 (Fed. Cir. 2011) (holding that "spring steel adapter" meant "adapter made from spring steel" when patent at issue disclosed a spring steel adapter and patent incorporated by reference "in its entirety" did also); Google Opening Br. at 7.

And, in any event, the sentence from the '661 application that Google quotes does not even support its argument. The '661 application says that aspects of the invention "can also be stored on *or read from* other types of computer-readable media." Declaration of Truman Fenton (Dkt. 97) Exhibit A, 13:24-32. We do not doubt that information can be "read from" a carrier wave, but it is not the case that information is "stored on" a carrier wave. Instead, the '661 application discloses that aspects of that invention are "stored on" secondary storage devices. *Id.*

There is no evidence intrinsic to the '720 patent that suggests transient signals could be storage media holding code. It would be error to construe the '720 patent as Google proposes.

C. '520 Patent

The '520 patent does not define "computer readable medium" to include carrier waves. The phrase "carrier waves" appears once in the specification, though Google quoted only a portion of the sentence in which it appeared, and thereby changed its meaning. The full sentence, with its grammatical structure indicated by spacing, states:

1 Although an exemplary embodiment of the present invention is described as being
2 stored in memory 206, one skilled in the art will appreciate that it may also be

3 stored on other computer-readable media, such as secondary storage
4 devices like hard disks, floppy disks, or CD-Rom;

5 a carrier wave received from the Internet 204; or

6 other forms of RAM or ROM.

7 '520, 4:48-56. Semi-colon placement aside, Google's reading is also counterfactual, because it is
8 not correct to say that computer code is "stored on" carrier waves (though it may be "transmitted
9 by" carrier waves).

10 Google's overstated assertion that "any construction of phrases like 'computer-readable
11 media' in the context of this patent *must necessarily* encompass carrier waves" (Google Opening
12 Br. at 6) is not supported by the specification or the plain language of the claims at issue. The
13 claims recite a "computer-readable medium containing instructions for controlling a data
14 processing system to perform a method." '520, claims 18-23. Subject matter embraced by
15 Google's proposed construction—"acoustic waves," "light waves," and "radio-waves"—may
16 participate in providing instructions but by themselves do not "contain" instructions for
17 controlling a data processing system.

18 Google's three-sentence argument regarding the '520 patent is really an attempt to sweep
19 it in with the '447 and '476 patents. The specifications are quite different and Google's proposal
20 should be rejected.

21 **D. '702 Patent**

22 The phrase "computer-readable medium" does not appear in the '702 patent. For that
23 reason alone, it would be improper to import a paragraph concerning "computer-readable
24 medium" from the '447 patent into the '702 claims as Google proposes.

25 The '702 claims recite a "computer program product comprising a computer usable
26 medium having computer readable program code embodied therein" '702, claims 7-12. As
27 explained in Oracle's opening brief at pages 21-22, these claim terms do not cover transmission
28 media.

Google's one-paragraph argument relies primarily on this sentence from the specification:

The received code may be executed by CPU 213 as it is received, and/or stored in mass storage 212, or other non-volatile storage for later execution. In this manner, computer 200 may obtain application code in the form of a carrier wave.

'702, 7:10-14. The fact that a computer "may obtain" application code in the form of a carrier wave that a CPU may then execute does not mean that the carrier wave comprises a computer program product. *See* '702, claims 7-12. Google's cited portion of the '702 specification pertains to how copies of the invention are transmitted from one computer to another, not to the claimed invention itself.

Google also quotes a few phrases from the '702 specification entirely out of context. For example, the '702 specification provides (with Google's quoted phrases underlined):

Computer 200 may also include a communication interface 220 coupled to bus 218. ...In any such implementation, communication interface 220 sends and receives electrical, electromagnetic or optical signals which carry digital data streams representing various types of information." ('702, 6:37-52.)

Network link 221 typically provides data communication through one or more networks to other data devices. For example, network link 221 may provide a connection through local network 222 to host computer 223 or to data equipment operated by an Internet Service Provider (ISP) 224. ISP 224 in turn provides data communication services through the world wide packet data communication network now commonly referred to as the "Internet" 225. Local network 222 and Internet 225 both use electrical, electromagnetic or optical signals which carry digital data streams. The signals through the various networks and the signals on network link 221 and through communication interface 220, which carry the digital data to and from computer 200, are exemplary forms of carrier waves transporting the information. ('702, 6:53-67.)

The '702 specification discloses that carrier waves and electrical, electromagnetic, and optical signals transport information from one computer to another, but it does not disclose that such things are computer program products comprising a computer usable medium having computer readable program code embodied therein.

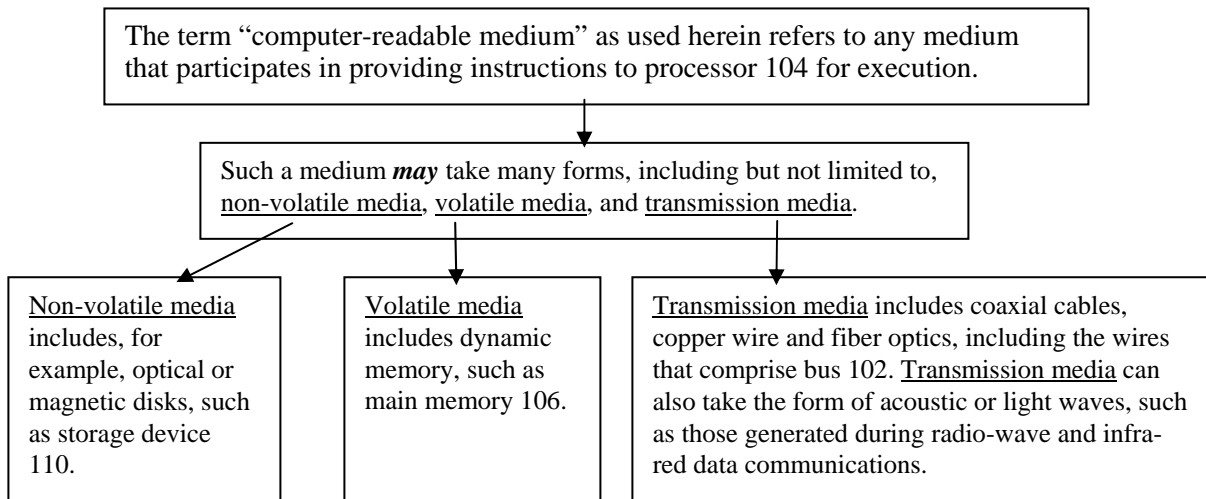
E. '205 Patent

There is no reason to consider the '205 patent with respect to "computer-readable medium." No claim from that patent asserted in this case contains that term, and the '205 patent is irrelevant extrinsic evidence with respect to the construction of the other patents in suit.

F. '447 and '476 Patents

Google attempts to construe all of the patents in light of a paragraph from the '447 and '476 specifications. '447, 5:4-16; '476, 5:4-16. Although that effort is improper, it is proper to use the paragraph to construe “computer-readable medium” in the '447 and '476 patents.

Google’s reading of the paragraph, however, is careless and incorrectly treats potential or permissive language as definitional language. Google Opening Br. at 5. The paragraph is reproduced here in full, with its grammatical structure indicated in chart form:



The first sentence is definitional: “The term ‘computer-readable medium’ as used herein refers to any medium that participates in providing instructions to processor 104 for execution.” That is not in dispute.

The second sentence is not definitional. The second sentence uses the word “may,” which stands in contrast to the “as used herein refers to” language used in the first sentence. “May” is used to express a proposition of possibility, opportunity or permission, contingency, or wish. Some common-sense examples may help to illustrate the point:

- The proposition of “it *may* rain” imparts possibility.
- The proposition of “you *may* speak” imparts permission or opportunity.
- The proposition of “I *may* attend if it doesn’t rain” imparts contingency.
- The proposition of “*may* you live long” imparts a wish.

“May” does not inherently impart a definition or certainty.

Consistent with that usage, “may” does not impart a definition in the '447 and '476 patents either. The remaining sentences in the paragraphs are not definitions of “computer-

1 readable medium,” and the language that follows the paragraph does not alter the analysis
2 because it, too, is permissive and non-definitional. ’447, 5:17-6:21; ’476, 5:17-6:21.

3 Even if the Court were to regard the language as definitional, it is not controlling.
4 Notwithstanding an express definition in a specification, a court may construe the term more
5 narrowly. In its opening brief, Oracle explained why the Court should do so in this case. Oracle
6 Opening Br. at 24-25.

7 The issue that “computer-readable medium” presents in the ’447 and ’476 patents is larger
8 than just these two patents: what shall courts do with the thousands of patents issued in the past
9 decade that have *Beauregard* claims and disclose both storage media and transmission media as
10 embodiments? In 2001, the Patent Office instructed its examiners that “a signal claim directed to
11 a practical application of electromagnetic energy is statutory regardless of its transitory nature.”
12 MANUAL OF PATENT EXAMINING PROCEDURE § 2106 at 2100-14 (8th ed. 2001) (Peters Supp.
13 Decl. Ex. 10). To this day, the Patent Office instructs that a software invention claimed as a
14 program embodied in a tangible medium is statutory subject matter under Section 101. MANUAL
15 OF PATENT EXAMINING PROCEDURE § 2106.01 at 2100-18 (8th ed. 6th rev. 2007) (explaining that
16 “a claimed computer-readable medium encoded with a computer program is a computer element
17 which defines structural and functional interrelationships between the computer program and the
18 rest of the computer which permit the computer program’s functionality to be realized, and is thus
19 statutory.”) (Peters Decl. Ex. 5). Given a choice of constructions, it is appropriate to construe
20 claims in a manner that does not “risk destroying the legitimate expectations of inventors in their
21 property” or “unfairly discount the expectations of a patentee who had no notice at the time of
22 patent prosecution.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 739
23 (2002) (“To change so substantially the rules of the game now could very well subvert the various
24 balances the PTO sought to strike when issuing the numerous patents which have not yet expired
25 and which would be affected by our decision.”).

CONCLUSION

For the foregoing reasons and the reasons presented in its opening brief, Oracle respectfully requests that the Court adopt its proposed claim constructions.

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